Gartner

Report Prepared for

Miami-Dade Transit

Total IT Expenditure

October 17, 2003

Executive Summary

Introduction

The *Rapid Assessment for Total IT Expenditure* provides a health check for Miami-Dade Transit's Information Technology (IT) environment. This is a high-level look at the current environment and covers a 12 month time period. A number of functional areas have been evaluated.

For each functional area selected in this analysis, a composite peer group is formed for comparison purposes. The enterprises selected have key workload characteristics similar to those of Miami-Dade Transit. Each functional area has a different selected peer group.

The selection of the different peer groups enables Gartner Measurement to compare Miami-Dade Transit with other enterprises based on key metrics. These key metrics are used to provide an indication of the cost-efficiency of the Miami-Dade Transit organization.

The goal of the *Total IT Expenditure* study is to provide Miami-Dade Transit with an understanding of where they are in terms of cost efficiency and effectiveness. The results of the study were based on Miami-Dade Transit's cost to provide various IT services to the agency for fiscal year 2002.

The *Total IT Expenditure* study includes the following technology area assessments along with the key metrics:

❑ IT Help Desk	Cost per Completed Call
❑ Midrange Computing	Cost per System
❑ Distributed Computing	Cost per User
❑ Wide-Area Data Network	Cost per Device
❑ Voice Technology	Cost per Extension
❑ Voice Network	Cost per Minute
❑ Applications Development	Cost per Function Point Developed
❑ Applications Support	Cost per Function Point Supported

The metrics listed for the areas selected for inclusion by Miami-Dade Transit represent a portion of the aggregated metrics for each key IT functional area that we believe will provide the "health check" information that CIOs and senior IT managers require, at a minimum, to develop an IT baseline for those functional areas. These metrics set the stage for a consistent methodology enabling the accurate identification of costs and workload attributes as well as an internal and external comparative analysis to determine how well each of the selected functional areas is performing.

Introduction

In addition to the quantitative assessment of the selected technology areas, management surveys were conducted to determine the alignment of IT with the business requirements.

The purpose of the management surveys is to gain an understanding of the quantitative and qualitative aspects of the Information Services (IS) organization as well as how IT services are delivered to and perceived by the business units.

A major contributing factor to aligning the IS organization with the business objectives of the organization is a mutual understanding of strategies between the IS organization and the business units. Ideally, IS and the business units will contribute to each other's strategic plans. The goal of this collaboration is to maximize the benefits of IT to the entire organization.

Scope

The benchmark analysis covers the fiscal year 2002. A total of $5,471,680 of Miami-Dade Transit's expenditures has been included in the consensus model. Occupancy costs for the peer group were removed in each of the technology areas, as Miami-Dade Transit does not pay for space in the Stephen P. Clark Center, Downtown, Miami building they occupy. Real Time Systems and the support of those systems were excluded from the scope of this engagement.

Peer Groups

Peer groups were chosen on the basis of comparable workload to Miami-Dade Transit, based on the scope of support and the complexity of the environment. Each peer group is comprised of different companies for the services being benchmarked.

Each peer group chosen based on its workload profile:

- ***IT Help Desk*** - Number of inbound calls, including abandoned, and the overall complexity of the environment as defined by the type of calls taken
- ***Midrange Computing*** - Type of platform, number of systems and the complexity of the environment as defined by the rate of change and application load
- ***Distributed Computing*** - Number of end users supported, number of devices in the LAN environment and complexity of the environment
- ***Wide-Area Network*** - Type of environment and the number of sites, devices and traffic/gigabytes/month that are supported on the backbone
- ***Voice Network*** - Type of environment, number of inbound and outbound long distance minutes, sites and type of network supported
- ***Voice Technology (PBX - Voice Switch)*** - Number of extensions, sites and Moves/Adds/Changes per month
- ***Applications Development & Support*** - Number of function points developed and supported

Total Cost by Technical Area

The aggregate IT consensus model costs for Miami-Dade Transit for those modules included in the analysis at $5,471,680 vs. $6,765,994 are $1,294,314 (or 19.1%) lower than what the composite peer group would spend to perform Miami-Dade Transit's workload.

For the services measured, at the summary level, Miami-Dade Transit outperforms the efficiency of the selected composite peer groups in most areas:

Total Cost by Area	MDT	PEER	Variance $	Variance %
Midrange - Unix	$155,758	$170,538	($14,780)	-8.7%
Midrange - NT	$344,238	$415,912	($71,674)	-17.2%
Midrange - Unix	$204,245	$227,789	($23,544)	-10.3%
Wide Area Data	$442,216	$281,321	$160,895	57.2%
IT Help Desk	$247,473	$376,892	($129,419)	-34.3%
Distributed Computing	$1,839,131	$2,361,519	($522,388)	-22.1%
Voice Network	$47,390	$40,963	$6,427	15.7%
Voice Technology	$908,130	$1,359,659	($451,529)	-33.2%
Applications Support	$395,897	$643,878	($247,980)	-38.5%
Applications Development	$887,201	$887,524	($323)	0.0%
Total	*$5,471,680*	*$6,765,994*	*($1,294,314)*	*-19.1%*

Total Cost by IS Component

Miami-Dade Transit spends less than the peer group on Hardware, Personnel, Transmission, and Disaster Recovery. They spend more than the peer group in aggregate for Software and Outsourcer Services.

Cost by IS Component	MDT	PEER	Variance $	Variance %
Hardware	$1,149,743	$1,730,545	($580,802)	-33.6%
Software	$682,464	$442,031	$240,433	54.4%
Personnel	$2,297,143	$3,458,047	($1,160,904)	-33.6%
Transmission	$203,742	$647,897	($444,155)	-68.6%
Disaster Recovery	$0	$14,054	($14,054)	-100.0%
Outsourcer	$1,138,588	$473,420	$665,168	140.5%
Total	*$5,471,680*	*$6,765,994*	*($1,294,314)*	*-19.1%*

Note: While the Miami-Dade Transit spend is 140.5% greater than the peer group in Outsourcing, it is more than offset by the spending deficit in Personnel, Transmission, and Hardware.

Total Full Time Equivalent Personnel by Technical Area

The total number of full-time equivalent (FTE) personnel within the IT areas measured for Miami-Dade Transit is significantly lower than the peer group FTE staff that would be required to support Miami-Dade Transit's workload; however, Miami-Dade Transit has outsourced some of the work in specific technical areas. Miami-Dade Transit utilizes 32.2 FTEs compared to the peer group at 47.4 FTEs.

Total FTEs by Area	MDT	PEER	Difference
IT Help Desk	**3.7**	**6.0**	**(2.3)**
Voice Technology	**0.1**	**3.7**	**(3.7)**
Distributed Computing	**8.8**	**14.9**	**(6.1)**
Wide Area Data	**2.1**	**1.2**	**0.9**
Applications Development	**9.3**	**10.7**	**(1.4)**
UNIX	**0.4**	**1.4**	**(1.0)**
NT	**2.5**	**2.5**	**0.0**
VMS	**0.7**	**0.9**	**(0.2)**
Applications Support	**4.5**	**6.0**	**(1.5)**
Voice Network	**-**	**0.1**	**(0.1)**
Total	***32.2***	***47.4***	***(15.2)***

Observations by Technical Area

IT Help Desk - Costs are 34.3% lower than the peer group. A dedicated staff enables this service to be provided at a minimal cost to the organization. The Help Desk supports the user environment with 3.7 FTEs compared to the peer group with 6.0 FTEs that would be required to support Miami-Dade Transit's workload of 16,273 annual completed contacts.

Distributed Computing - Costs are 22.1% lower than the peer group. Miami-Dade Transit spends 44.1% less on personnel than the peer group, supporting the environment with 8.8 FTEs compared to 14.9 FTEs. In addition to supporting the Distributed Computing environment with fewer FTEs at a lower cost per FTE, Miami-Dade Transit also spends $457K less in Outsourcing than the peer group - some of the Outsourcer costs translates into personnel.

Midrange Computing - Unix - Costs are lower than the peer group. Personnel costs are significantly lower than the peer group. The asset management systems for software and hardware are manual.

Midrange Computing - NT - Costs are lower than the peer group, primarily in the Personnel and Outsourcer areas. This is the fastest growing and largest platform. The asset management systems for software and hardware are manual.

Midrange Computing - VMS - Costs are lower than the peer group, primarily in the Personnel and Outsourcer areas. This is the fastest growing and largest platform. The asset management systems for software and hardware are manual.

Voice Network and Voice Technology - These services are provided by the Information Technology Department (ITD). The Voice Network cots are slightly higher than the peer group, but in Voice Technology (PBX), the costs are significantly lower than the peer group. Miami-Dade Transit provides minimal support in these areas.

Wide Area Data Network - Costs are higher than the peer group. Transmission, Hardware, and Personnel costs are higher than the peer group, while Outsourcer costs are lower.

Applications Development - Costs are similar to the peer group, and Miami-Dade Transit relies on packages and contractors to supply many of the services in this area.

Applications Support - Support costs for the applications portfolio are significantly lower than the peer group. Fewer Personnel is the key driver to this efficiency.

Key Issues

Miami-Dade Transit is doing an excellent job of managing IT spending in the study areas. The environment is very low cost compared to the peer group; especially in the areas of personnel, hardware, and transmission. Demand for IT services is high within Miami-Dade Transit and is increasing.

Staffing levels are significantly lower than the peer group. Experienced and dedicated personnel along with effective practices such as standardization allow Miami-Dade Transit to operate at current staffing levels. However, the support levels are at what Gartner would consider to be high-risk points. Several comments from the division managers referenced lean staffing resources as a significant concern in terms of achieving objectives. ITS is also at risk of losing key staff from burnout.

In addition to more staffing resources, the “wish list” from the divisions includes improvements in planning (shorter cycles and more flexibility), improved time to market, and ability to do more projects. The IT environment is now likely at "the point of diminishing returns" and is at a point where further reductions will result in degradation of service, or increased workload will result in higher costs or degradation of service. However, it is expected that Miami-Dade Transit will be pushed to provide more service with existing or even reduced spending levels. This will necessitate a focus on innovation, service delivery and allocation of IT resources to meet the division goals. This demands superior communication among ITS management, ITS staff, and the divisions.

Recommendations

As indicated earlier, the study results do not show any opportunities for significant cost reduction. However, it is likely that cost reduction and/or containment strategies will be demanded of ITS. Because of the significant variance from the peer group, Gartner encourages Miami-Dade Transit to approach any further cost reductions cautiously.

- ITS must be very careful when competing for resources and that the need for ongoing investment in IT is well understood by the administration. Even after the initial investment, environments still have to be supported, upgrades have to occur, and attention paid to changing requirements from constituents.
- Therefore, it is recommended that IS understand all costs and their relationship to services delivered. This is to ensure that ITS management is armed for budget battle and can show the direct impact of contained spending levels on service. This is to help determine where it would be appropriate to reduce spending versus (e.g. "nice to have" features) what is necessary to maintain service levels and fulfill Miami-Dade Transit objectives. The IT environment is too lean to risk indiscriminate cost reduction and it is crucial that the administration understands the value received from the IT services.

The management survey results indicate a good working relationship among IS and the divisions. An area of improvement where the divisions indicated less satisfaction was ITS' ability to deliver new products and services in a timely manner.

- It is suggested that ITS work with the administration to see what can be done to reform these processes and to explore alternative funding models or add personnel to deliver in a timely fashion. More flexibility is needed to respond to changing requirements than the current planning, funding, and staffing process allow. This is crucial since IT services impact the efficiency of transit processes and services to citizens.

As indicated throughout the observations, staffing resources are highly leveraged at Miami-Dade Transit. ITS is delivering the current workload with far fewer people than the composite peer group. While the division managers praised many aspects of ITS service, time to market and lack of resources were definite concerns. This may also impact the IS organization's ability to work within the framework of anticipated strategic efforts.

- Utilize the results of this report to communicate workload and staffing issues to Miami-Dade Transit stakeholders. ITS must ensure that the administration understands that just because ITS has managed to meet and often exceed expectations with existing resources that this does not mean that this is indefinitely sustainable.
- With the lean staffing levels, expectations with regard to support and the integration of new technology in the environment may outpace the ITS organization's ability to keep up with this demand. This may result in a drop in customer satisfaction. Ensure that the administration understands this and is aware of the risks involved with the lean staffing levels.

Recommendations

In addition to customer satisfaction, also of concern is Miami-Dade Transit ITS' greatest asset, its workforce. The staffing resources are leveraged to the point at which turnover risk is significant. At some point, the demands placed upon the staff are too high, and they will look elsewhere. Despite an uncertain economy, demand for IT professionals remains strong.

- It is recommended that IS monitor staff issues in order to maintain morale and staff perceptions to maintain a knowledgeable, contented and motivated IT staff. Suggested ways to focus on improving morale and communications:
  - Meet with staff to determine key issues (perceived or real).
  - Form a team to review issues and make recommendations, include staff representatives.
  - Develop and implement a plan to address issues.
  - Report actions and results to the staff.
  - Regularly seek staff ideas to improve processes and conditions.
  - Survey staff perceptions at least annually in order to chart and communicate progress on key issues.

The Midrange environment is also very lean and will be stretched even further with the additional application load. It is suggested that Miami-Dade Transit add staff and evaluate tools investment in this area.

- Gartner studies indicate a correlation between staffing size and server availability. Increases in workload, complexity and service levels without an increase in staff have been matched with decreases in availability as reported in Gartner Measurement benchmarks. Staffing levels in many cases are too lean to maintain availability of mission critical business applications. This situation is exacerbated by the lack of availability of qualified technical resources in the market.
- Getting the staff adequate training is also crucial to manage these complex environments. Support tools to automate functions are improving in the mid-range environment and it is suggested that ITS investigate these offerings.

Review and/or create disaster recovery and business continuity plans to ensure sufficient levels of protection are in place.

- Verify that fail-over servers have been identified or that outsourced services have been secured.
- Verify that sufficient off-site storage is being utilized.
- Implement and test the disaster recovery plan to ensure it can be executed with minimal business disruption.

Recommendations

The Distributed Computing environment is yet another lean area. It is recommended that ITS add staff in this area due to its direct impact on end users. In addition, when upgrades are planned, a suggestion is to recruit "user champions" from the divisions to augment support staff. This staff, reporting to ITS, can assist with first line support issues, (e.g. common division specific application and personal productivity issues).

It is also suggested that Miami-Dade Transit continue to refine the IT Help Desk services. This is an area that requires ongoing enhancements and staff training to fully realize the benefits of prior investments and to maintain end user satisfaction.

IT/Business Alignment

Summary of IT/Business Alignment

Overall, the dependence on IT and the confidence in MDT ITS to provide IT services has increased from the division respondent's perspective. Current and future satisfaction scoring has also improved compared to prior satisfaction of the services delivered and developed by MDT ITS. In the specific areas of content, quality and cost, significant improvements have been recognized by the divisions, but less so with the ability to deliver in a timely fashion. The divisions also expressed a great deal of confidence in what will be developed and delivered.

Both MDT ITS and the division respondents indicated a good understanding of the Planning and Decision process for ITS and the divisions. The divisions indicated a periodic and formal process was in place to communicate their requirements to MDT ITS, and ITS also recognized they have good communication with the divisions to understand their requirements.

The divisions responding indicated they have a better understanding of MDT ITS' goals and strategies than ITS' view of the divisions understanding. The divisions also indicated that the ITS strategy was somewhat aligned with their goals. The divisions responding to the survey indicated a higher level of Importance for each of the four areas than did ITS. ITS reported a higher confidence level that they will deliver on Content, Quality, and Timeliness. The divisions had a higher level of confidence that the services would be delivered in terms of Cost parameters. The lowest confidence score from the divisions was in the area of Timeliness, which ITS reported a relatively lower score as well.

IT Deliverables - Importance/Confidence that IS will deliver:

	Importance			Confidence that IS will Deliver on:		
	LOB	CIO/IS	Difference	LOB	CIO/IS	Difference
Content	4.71	4.00	0.71	3.57	4.00	(0.43)
Quality	4.71	4.00	0.71	3.43	4.00	(0.57)
Timeliness	4.57	4.00	0.57	2.71	3.00	(0.29)
Cost	4.33	3.00	1.33	3.50	3.00	0.50
Overall Confidence that IS can deliver				3.71	4.00	(0.29)